等距曲线的圆域Bézier逼近

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Abstract
To some extent, using a plane curve to approximate an offset curve of the plane Bézier curve is restricted. In this paper, a region approximation idea that means using a "fat curve" with a width to approximate the offset curve is proposed, and a complete set of algorithms to approximate offset curve using disk Bézier curve are given and implemented. In the algorithms, the optimal and uniform approximate curve of the offset curve as the central curve of the Disk Bézier curve is found by using Remez method, and then the upper optimal and uniform approximation principle is proposed to compute the error radius function of the Disk Bézier curve. Thus, the whole Disk Bézier curve can be obtained. In the end of this paper, the approximate effect of the Disk Bézier curve is not only analyzed and assessed, but also some specific examples are provided.

Chen X, Wang GJ. Disk Bézier curve approximation of the offset curve. *Journal of Software*, 2005,16(4): 616-624.
http://www.jos.org.cn/1000-9825/16/616.htm

摘要
用一条平面曲线来逼近平面Bézier曲线的等距曲线具有一定的局限性.提出用一条带宽度的"胖曲线"来逼近上述等距曲线的区域逼近思想,并建立与实现了圆域Bézier曲线等距逼近的整套算法,包括应用Remez方法求出等距曲线的最佳一致逼近曲线作为圆域Bézier曲线的中心曲线,提出上控最佳一致逼近的原理求出圆域Bézier曲线的误差半径函数,以及确定整条圆域Bézier曲线,最后还对该圆域Bézier逼近的效果做了分析和考核,并给出了一些具体实例.

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